

DANGER!

Only trained personnel should install or service heating equipment. When working with heating equipment, be sure to read and understand all precautions in the documentation, on labels, and on tags that accompany the equipment. Failure to follow all safety guidelines may result in damage to equipment, severe personal injury or death.

CAUTION!

Failure to turn off gas and electric supplies can result in explosion, fire, personal injury or death.

(ESD) PRECAUTIONS

Use caution when installing and servicing the furnace to avoid and control electrostatic discharge; ESD can impact electronic components. These precautions must be followed to prevent electrostatic discharge from hand tools and personnel. Following the precautions will protect the control from ESD by discharging static electricity buildup to ground.

1. Disconnect all power to the furnace. Do not touch the control or the wiring prior to discharging your body's electrostatic charge to ground.
2. To ground yourself, touch your hand and tools to a clean, metal (unpainted) furnace surface near the control board.
3. Service the furnace after touching the chassis. Your body will recharge with static electricity as you shuffle your feet or move around, and you must reground yourself.
4. Reground yourself if you touch ungrounded items.
5. Before handling a new control, reground yourself; this will protect the control. Store used and new controls in separate containers before touching ungrounded objects.
6. ESD damage can also be prevented by using an ESD service kit.

SPECIFICATIONS

ELECTRICAL RATINGS

- Voltage Range: Line (98 to 132 VAC) @60HZ
- Ignitor: 5A, 120 VAC
- Fan blower: 10A, 2 HP, 240 VAC
- Cool blower: 10A, 2 HP, 240 VAC
- Heat blower: 5A, ½ HP, 250 VAC
- Inducer blower: 4A, 120 VAC
- Gas Valve: 1A, 24 VAC
- Humidifier motor: 10A, 120 VAC

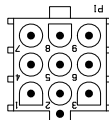
TIMING

- Prepurge Heat: 60 seconds
- Prepurge Cool: 1 second
- Postpurge Heat: 90-180 seconds
- Postpurge Cool: 40 seconds
- Trial for Ignition: 10 seconds

PIN CONNECTIONS

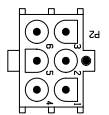
P1

- 1 – N/C
- 2 – 24 VAC Common
- 3 – Limit switch
- 4 – Gas valve
- 5 – Pressure switch OUT
- 6 – Pressure switch IN
- 7 – Flame sensor
- 8 – Limit switch IN
- 9 – 24 VAC Common



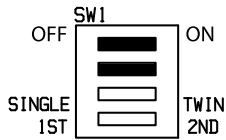
P2

- 1 – HSI
- 2 – N/C
- 3 – 120 VAC Neutral
- 4 – Inducer
- 5 – N/C
- 6 – 120 VAC Neutral



DIP SWITCH SETTINGS

• SW1 SWITCHES 1 & 2



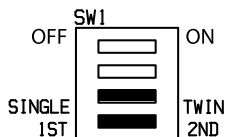
BLOWER TIMING			
OFF Time	SWITCH 1	SWITCH 2	
90	OFF	ON	
120	OFF	OFF	
160	ON	OFF	
180	ON	ON	

The HEAT speed air blower off time delay is selectable for 90 seconds, 120 seconds, 160 seconds or 180 seconds using top two positions of SW1.

The COOL speed air blower off time is fixed for 40 seconds.

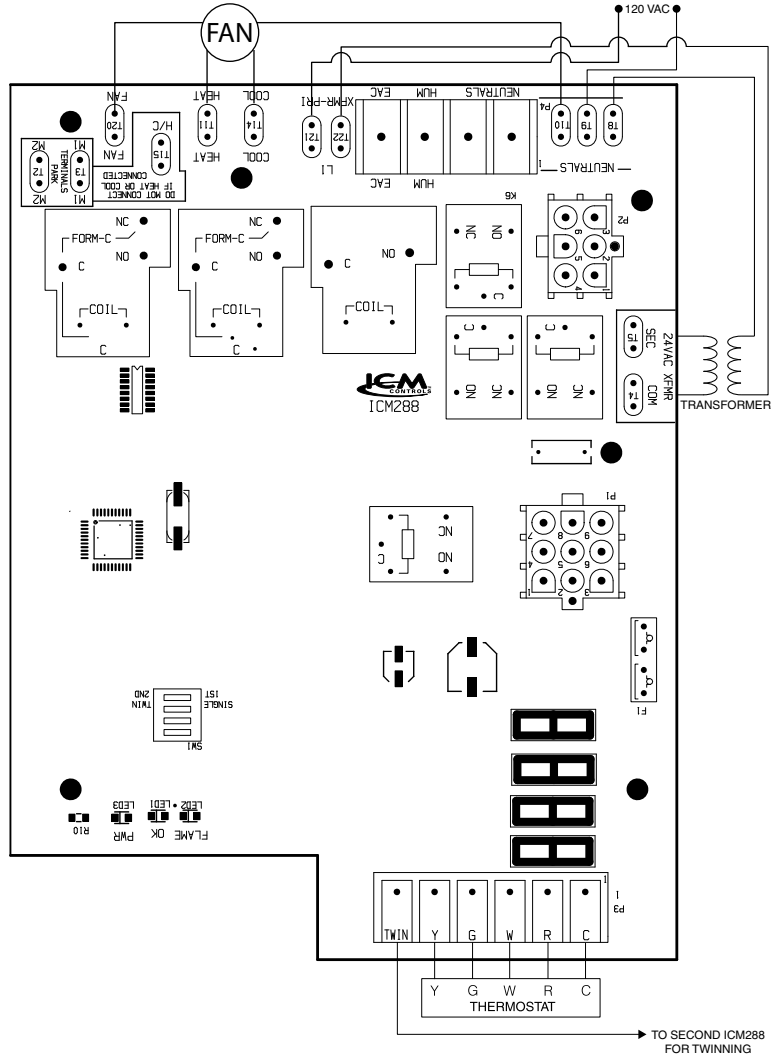
The G (Fan) mode, the Fan blower off time is fixed for 1 second.

• SW1 SWITCHES 3 & 4



SW1 Switch 3: Single or TWIN systems

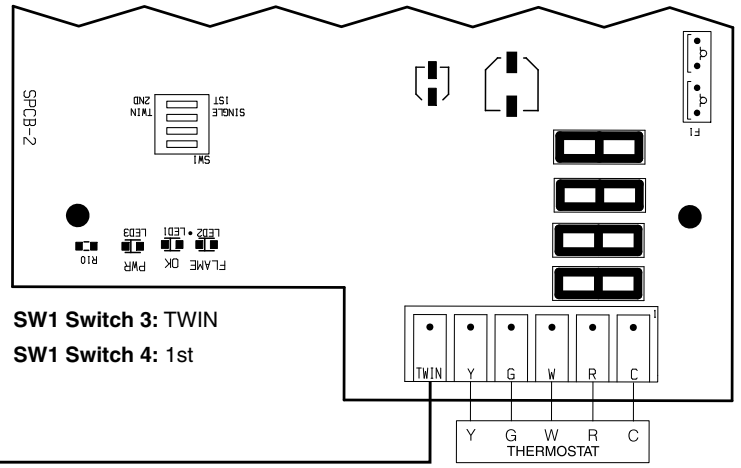
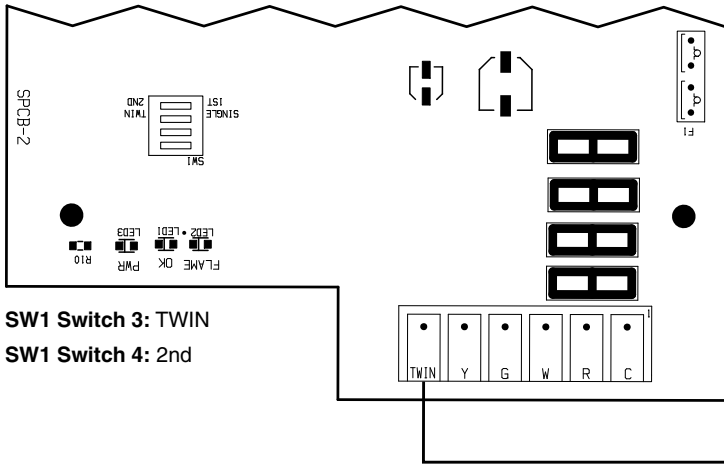
SW1 Switch 4: Select 1st or 2nd stage



The control has built-in self-diagnostic capability. If a system problem occurs, a blinking LED shows a fault code.

FAULT CODES		
LEDS	Flashes	Fault condition
GREEN	ON Steady	Normal operation
	1 Flash	Ignition failure (5 trials)
	2 Flashes	Pressure switch stuck open
	3 Flashes	Limit switches open
	4 Flashes	Pressure switch stuck closed
	5 Flashes	Twinning problem
	6 Flashes	Brownout voltage
YELLOW	7 Flashes	Hot & Neutral reversed or no ground connected
	Continuous	Gas valve relay shorted
RED	1 Flash every 2 sec.	Flame fault
	Continuous	Low flame or no flame
	ON	Flame present

TWINNING WIRING DIAGRAM – Single Stage Thermostat



TWINNING WIRING DIAGRAM – Two Stage Thermostat

